



The present invention is addressed specifically to cancer and rheumatic diseases. Heteropolymers have been used effectively in lupus-like models, but drugs have never been attached. If they were, it could be another step towards more complete treatments. In cancer, drugs have been attached to monoclonal antibodies with disappointing results, because the body turns against the unmasked antibody, sometimes making it antigenic itself. DNA is a stable substance in cancer which does not elicit antibodies, and, in lupus, has been shown to be an aid to administering monoclonal antibodies.

The methods of producing DNA-antibody polymers and attaching drugs to monoclonal antibodies are well known and established; the invention is easily and inexpensively carried out.

Conjunction of Drug with antibody (Example drugs: Doxorobucin)
(Pruam, et al: Cancer Research 55, 2353-56, June 1995).

The antibody is reduced with DTT (trichlorothane) at room temperature. After 30 minutes, the mixture is passed through an RD-10 (Pharmacia) column to remove the unreacted DTT. Doxorubicine (DOX) is treated with glutaraldehyde at room temperature and added to the antibody. The mixture is mixed in a rotary shaker for 1 hour. Unreacted DOX is removed by gel PD-10-filtration.

Biotinylated double stranded DNA is cross-linked to the antibody by incubation for 30 minutes at room temperature with 48 ml borate saline. (Ross, G.D. et al: Arthritis and Rheumatism 2005-14, 1985).

200540-33476660